

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-27 (cancelled)

Claim 28 (currently amended): A method of ~~BEMF back electromotive force~~ measurement, comprising the steps of:

- (a) turning off a driver for a current in a first direction through a voice coil;
- (b) after said turning off, estimating eddy currents induced by current in said first direction through said voice coil prior to said turning off;
- (c) for a time interval, turning on a driver for a current in a second direction through said voice coil, where said second direction is opposite said first direction and said time interval is determined from the results of said estimating;
- (d) after said time interval, measuring a ~~BEMF back electromotive force~~ of said voice coil.

Claim 29 (previously presented): The method of claim 28, wherein said estimating eddy currents is by timing a decay of flyback current through said voice coil following said turning off in step (a) of claim 28.

Claim 30 (previously presented): The method of claim 29, wherein said timing a decay includes measuring a voltage drop across a sense resistor in series with said voice coil.

Claim 31 (previously presented): The method of claim 28, wherein said turning off of step (a) of claim 28 includes turning off a first pair of transistors in an H-bridge connected to said voice coil and between a power supply and a power

sink, and wherein said turning on of step (c) of claim 28 includes turning on a second pair of transistors of said H-bridge.

Claim 32 (currently amended): A voice coil circuit, comprising:

- (a) a current driver for a voice coil;
- (b) a positioning control circuit coupled to said current driver;
- (c) an estimator control circuit coupled to said current driver circuit and to said positioning control circuit; and
- (d) a BEMF back electromotive force measuring circuit coupled to said current driver;
- (e) wherein said estimator control circuit is operable to:
  - (i) be enabled by said positioning circuit releasing control of said current driver;
  - (ii) determine a time interval; and
  - (iii) control said current driver to drive a current through said voice coil during said time interval and in a direction opposite to direction of current through said voice coil just prior to said positioning circuit releasing control of said current driver.

Claim 33 (previously presented): The circuit of claim 32, wherein said estimator control circuit determines said time interval by timing decay of a flyback current after said positioning control circuit releasing control of said current driver.

Claim 34 (previously presented): The circuit of claim 32, wherein said current driver includes an H-bridge with said voice coil and a current sense resistor connected between legs of said H-bridge and a power supply and a power sink connected to ends of respective legs of said H-bridge, and each leg includes a transistor plus a flyback diode.

Claim 35 (currently amended): A hard disk drive, comprising:

- (1) at least one disk with a magnetic film coating;

- (2) a read/write head assembly with a voice coil for positioning over said disk;
- (3) a voice coil circuit connected to said voice coil, including:
  - (a) a current driver for said voice coil;
  - (b) a positioning control circuit coupled to said current driver;
  - (c) an estimator control circuit coupled to said current driver circuit and to said positioning control circuit; and
  - (d) a BEMF back electromotive force measuring circuit coupled to said current driver;
  - (e) wherein said estimator control circuit is operable to:
    - (i) be enabled by said positioning circuit releasing control of said current driver;
    - (ii) determine a time interval; and
    - (iii) control said current driver to drive a current through said voice coil during said time interval and in a direction opposite to direction of current through said voice coil just prior to said positioning circuit releasing control of said current driver.

Claim 36 (previously presented): The hard disk drive of claim 35, wherein said estimator control circuit determines said time interval by timing decay of a flyback current after said positioning control circuit releasing control of said current driver.

Claim 37 (previously presented): The hard disk drive of claim 35, wherein said current driver includes an H-bridge with said voice coil and a current sense resistor connected between legs of said H-bridge and a power supply and a power sink connected to ends of respective legs of said H-bridge, and each leg includes a transistor plus a flyback diode.